

## Supporting Information

### Synthesis of nanostructured Protein-Mineral-Microcapsules by Sonication

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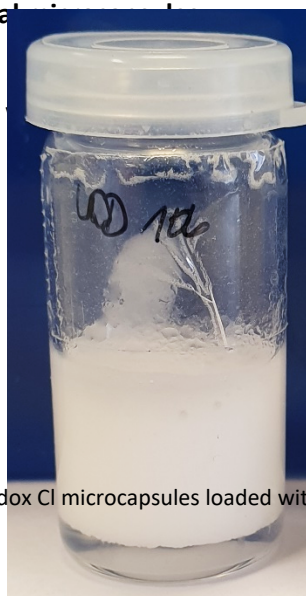
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#### Multistep washing process

The NPs with the BSA adsorbed on their surface were separated from the BSA solution by centrifugation. The supernatant still containing a certain amount of BSA, which was not adsorbed, was removed and the sediment was redispersed in BisTris to wash out the residual amounts of BSA, which was not properly adsorbed but could nevertheless be included in the sediment. This cycle represents an one step of multistep washing process. Subsequent repetition of this step three times represents an entire multistep washing process.

#### Stability of composite protein-mineral

Comparing the protein microcapsules with the mineral microcapsules, only little to no creaming was observed in the latter one within one week (see Figure S1).



**Figure S1.** Stable BSA-Ludox CL microcapsules loaded with toluene after one week.